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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/293,011	04/16/1999	YVETTE MARIE GORDON	07442009001	4298
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FISH & RICHARDSON PC 225 FRANKLIN ST BOSTON, MA 02110			EXAMINER SRIVASTAVA, VIVEK	
			ART UNIT	PAPER NUMBER
			2611	
			DATE MAILED: 06/16/2004	

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/293,011

Applicant(s)

GORDON ET AL.

Examiner

Vivek Srivastava

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 18 March 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-4, 6, 7, 9, 11, 22 and 27-72 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4, 6, 7, 9, 11, 22 and 27-72 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Response to Arguments*

*(1) Applicant argues the Examiner's first motivation, in particular, a content manager separate from the local servers would be easier to maintain, and second motivation, a content manager separate from the local servers would assure uninterrupted service because if a first local server were down, the content manager could still communicate with the second local server.*

The Examiner respectfully submits that there are numerous motivations obvious to an artisan for keeping the content manager separate from the first and second local servers, the Examiner relied upon two. Since Applicant's argue that the motivation is "contrary to common sense" and did not understand the motivation and or combination, the Examiner will explain the motivation in greater detail. Simply put, keeping components separate provides easier maintainence since each individual component is less complex in function. As for the second motivation, if the content manager was integrated with one server, and that server failed, the second server would not be functional. Keeping the content manager separate ensures continuity in the system, if one of the servers fails, the system can still run on one server, even though the services provided might be limited.

*(3) Applicant argues "A close reading of Burns, however, reveals that the Cache server 72 does not store viewable data objects at all, and that in fact, only the CMS 74 does so". Applicant then cites a portion of Burns stating "When the content is received from the content provider, the local service provider stores the content in the cache memory. For instance the content might be a Web page...If the Web page references or includes continuous data files, such as audio or video files, these files are stored in a continuous media server".*

A clear reading of this citation provided by Applicants states that the cache memory stores Web pages and the continuous data files like audio and video files are stored in the continuous media server. If Applicant's are trying to argue that Web pages are not viewable data objects, Applicant's are not correct and as a result, Applicants arguments are not persuasive.

*(4) Applicant's further argue that the CMS and cache server are completely different in both structure and function.*

The Examiner concurs with Applicant's findings that the functions are different. The Cache memory stores Web pages and the cache server continuous data files. However, as discussed above both are viewable data objects. Furthermore, it is noted Applicant argues that the cache server does not store viewable objects and Applicant's equate the viewable data objects to the continuous audio data files and Applicant's also

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state the continuous data files are stored in the CMS. Referring to figure 4, all continuous audio and video data files are stored in CMS 74 via the cache server 72. Thus it is clear from figure 4 that the continuous audio and video data files are stored in the cache server before being sent to the CMS.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

Claim 70 is rejected under 35 U.S.C. 102(e) as being anticipated by Burns et al (5,991,306).

Considering claim 70, Burns discloses a method of distributing viewable data objects to viewer receivers. In particular, Burns discloses cache server 72 and

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continuous media server 74 which are both accessible by subscriber PC's 58 and 60 (see fig 2). It should be noted that since both subscriber PC's can select viewable objects, Burns discloses the claimed "selecting a first viewable object from a pool of viewable data objects in response to a first predetermined event" and "selecting a second viewable object from the pool in response to a second preselected event".

Burns further discloses "the data comprising the target resource is stored in a proxy file in the cache memory 124, and any continuous data content (e.g., audio or video data) is stored in the continuous media server 126". It should be noted that the target resource would be inherently given a higher priority to be stored in the cache memory. Further, since both subscriber PC's can view data object from either server, Burns discloses the claimed "sending the first viewable object from the first local server to a first viewer receiver; and sending the second viewable data object from the second local server to a second viewer receiver".

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**Claims 1-4, 7, 9, 11, 33-36, 38-40, 42-44, 49-52, 54-57, 59-63, 67-69, 71 and 72 are rejected under 35 U.S.C. 103(a) as being unpatentable over Burns et al (5,911,306) in view of Kindell et al (5,630,067).**

As to claim 1, note the Burns et al reference which discloses a pull-based, intelligent caching system for a network system. Content service providers are connected to local service providers via an interactive distribution network. The local service providers facilitate the delivery of the content from the content provider to multiple subscribers. The local service providers schedule the delivery of frequently requested content from the content provider prior to a peak time when the subscribers are likely to request content. The content is downloaded during off-peak hours and cached at the local service providers for serving to the subscribers during the ensuing peak time. In this manner, the frequently requested content is already present at the local service providers and ready to be served to the subscribers when they actually request it. When the content is finally requested, the data is streamed continuously in a real-time manner for just-in-time rendering at the subscriber computer. Note Figure 2 and the associated disclosure. The claimed plurality of local servers...is met by the local service providers, the ISPs 56, and the claimed at least one storage server....is met by the content server 52. The reference further discloses that the ISP's 56 include continuous media servers (CMSs) 74 which provide continuous media streams, such as audio and video data using a disk array data storage system having associated therewith a memory map storing the locations of, or pointers to, particular audio and video data streams, col 6 lines 66+. In operation, a requested video stream is retrieved by a processor using the associated pointer, and the stream is provided to the subscriber over communications lines 66, 68. This processor is naturally in communication with the content server 52 (via the cache server 72, Fig 2) in order to

download audio and video data to the disk array data storage system for continuous media applications.

Burns fails to disclose the claimed content manager separate from first and second local servers. Kindell discloses a manager, which is separate from a remote server and a local server, which retrieves a user's request (see col 6 lines 45-63). It would have been obvious modifying Burns to include a manager separate from the servers would have enabled easier maintenance since the components would have been separate and would have also insured uninterrupted service since the manager could communicate with another server in case a given server is non-functional.

As to claim 3, the reference discloses subscriber PCS 58 and 60. The reference also discloses an alternative cable television environment consisting of cable headend servers, cable headends, and cable networks, in which television receivers are inherent.

As to claim 4, the ISPs 56 have servers which are designed to cache and serve the most frequently requested continuous data streams, such as video and audio data streams, and employ a disk array data storage system of finite capacity. Consequently, priority storage is considered inherent for data considered most 'frequently requested'.

As to claim 6, as noted above, the processor associated with the CMS 74 of the ISP 56 accesses a memory map which defines the logical locations of segments of audio or video streams which are stored across the disk array.

As to claims 9 and 11, the disclosed system is clearly an interactive, two-way, on-demand video system which dynamically provides access to video streams at the request of subscribers.

As to claim 34-36, 2, 38-40, 42 and 43, as noted above for claim 4, the reference clearly indicates that the most frequently requested content, whether that be Web pages or continuous media, is intelligently pre-cached in order to avoid latency problems.



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Frequently requested content is statistically identified and downloaded at off-peak hours, and stored at the CMS 74 accordingly. The 'alterable property' associated with the continuous media is the desirability of the media as defined by the frequency with which it is requested.

As to claim 44, the above-noted processor associated with the CMS 74 is, as indicated, in communication with the processor of the content server 52 for the purpose of coordinating the caching or downloading of continuous media. It can therefore be said that the flow of content is managed in a distributed fashion.

Claims 7, 33, 49-52, 54-57, 59-63, 67-69 and 71 are met by that discussed above.

Regarding claim 72, the combination of Burns and Kindell fails to disclose the claimed wherein the content manager is in communication with one of said first and second local servers by way of the storage server.

It would have been obvious to one skilled in the art to modify the combination of Burns and Kindell to include the claimed limitation to quickly check to see if the content requested has been previously sent from the storage server to the local server or in case it has not been sent, to send the content from the storage server to the local server to ensure the user gets the content requested.

As to claims 37, 45 and 53, the reference discloses the collection of viewer statistics at individual ISPs 56 for caching purposes, and points to changes in taste based on changes in demographics and geographical regions. However, such centralized statistical collection and programming control is well-known in the cable television art when one is concerned with the programming for a collection of cable television headends. The advantage for centralizing control over priority designations for continuous media selections is that such processing is otherwise not required at the

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disparate headends. Further, continuous media, as opposed to Web page media, is often uniformly liked over broad regions, and consequently lends itself to the arrangement. Therefore, the Examiner submits that it would have been clearly obvious to one of ordinary skill in the art at the time of the invention to modify the Burns et al system to attach a priority to continuous media based on the statistical analysis of several ISPs/headends for the stated advantage.

As to claim 41 and 58, it can be said that the popularity of a given continuous media presentation dictates the revenue projections that headend providers would attach to the media. Assuming arguendo, it is well-known in the cable television art to cache new releases for video-on-demand purposes and to attach a higher service charge to such presentations for the purpose of capitalizing on new media. It would have been clearly obvious to one of ordinary skill in the art at the time of the invention to modify the Burns et al system accordingly for the stated advantage.

As to claims 46-48 and 64-66, the Burns et al reference is silent as to a streaming control process, yet such control is notoriously well-known in the art of video-on-demand as a mechanism for imparting VCR-like control, such as pause, fast-forward, and reverse, to the client server environment. It would have been clearly obvious to one of ordinary skill in the art at the time of the invention to modify the Burns et al system with such video stream control to make the presentation of continuous media more desirable to the user.

### ***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

**Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks  
Washington, D.C. 20231

**or faxed to:**

(703) 872-9314; (for formal communications intended for entry)

**Or:**

(703) 308- 5399 (for informal or draft communications, please label  
"PROPOSED" or "DRAFT")

Hand-delivered responses should be brought to Crystal Park II, 2121  
Crystal Drive, Arlington, VA., Sixth Floor (Receptionist).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vivek Srivastava whose telephone number is (703) 305

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- 4038. The examiner can normally be reached on Monday - Thursday from 8:00 am to 5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andy Faile, can be reached at (703) 305 - 4380.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the group receptionist whose telephone number is (703) 305 - 3900.

VS

6/11/04



**VIVEK SRIVASTAVA  
PRIMARY EXAMINER**